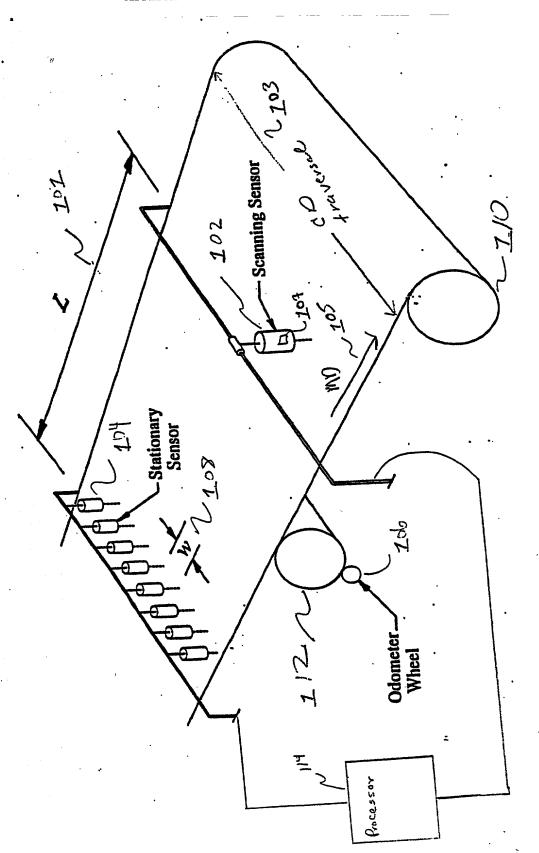
SCANNING SENSOR

Inventor(s): Mario Ignagni et al Application Serial No: 018028-245

SHEET 1 of 7



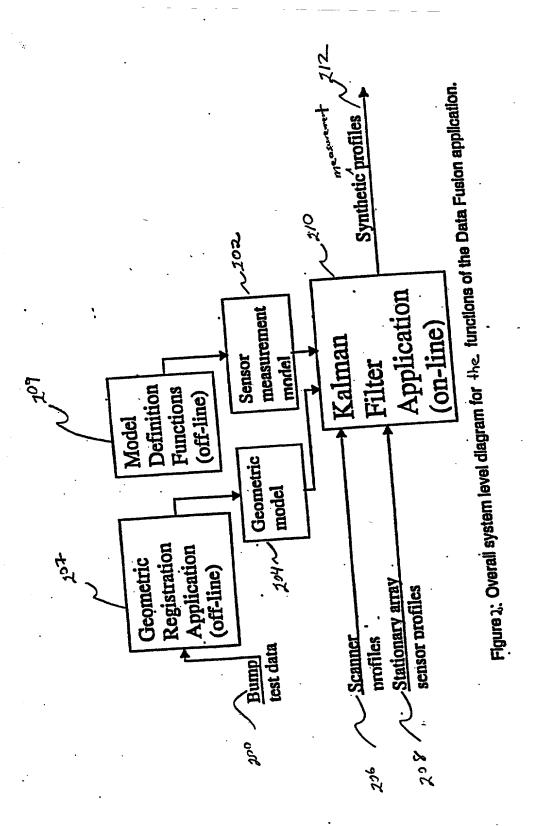
Paper Production Monitoring Scheme Measurement Figure 1.

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NNING SENSOR

Inventor(s): Mario Ignagni et al Application Serial No: 018028-245

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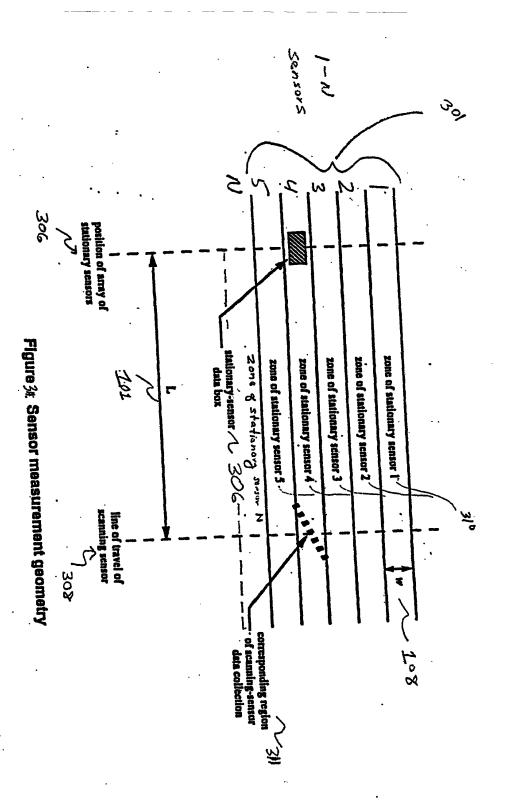
APPLN. FILING DATE: JULY 13, 2001

TITLE: DATA FUSION OF STATIONARY ARRAY SENSOR AND

SCANNING SENSOR

INVENTOR(S): MARIO IGNAGNI ET AL APPLICATION SERIAL NO: 018028-245

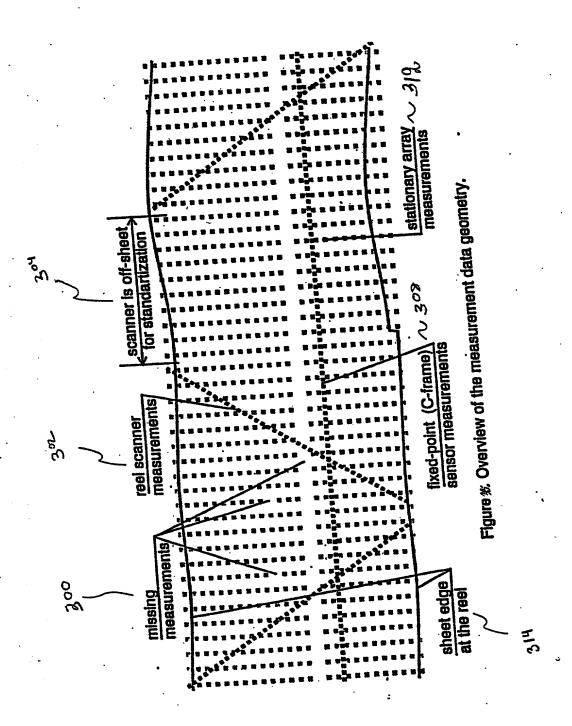
SHEET 3 of 7



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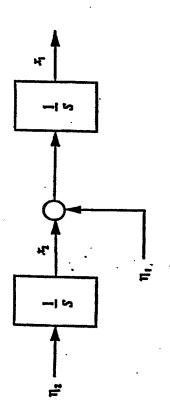


Figure 4: Dynamical model for sensor bias

SCANNING SENSOR INVENTOR(S): MARIO IGNAGNI ET AL APPLICATION SERIAL NO: 018028-245 SHEET 6 of 7 Kalman Filter "7" Update Stationary Sensor 1 Kalman Filtet "4" Update Cungeasation Coefficient Kalman Filter "3" Update Congensation Coefficient Kalman Filter "N" Update Comprensation Coel Kaiman Filter "1" Update Figure 5; Stationary Sensor Bias Identification Concept Selected Kalman Filter (1....N) lagged stationary sensor output measurement enable discrete Kalman Filter Select Logic Sensor 'N' Output Sensor '3 Sensor 4 214 zone width (w) Scaning-Sensor essurement Enable Logic Moving-Window Memory scanning sensor position scanning sentor position zone width (w) distance (L.) between stationary Sensor Data Storage Logic Prefiller Prefilter Prefilter Prefilter 318 220 Stationary Sensor Scanning Sensor Scanning Sensor Position Readout Stationary Sensor Stationary Sensor Stationary Sensor ż.

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INVENTOR(S): MARIO IGNAGNI ET AL APPLICATION SERIAL NO: 018028-245

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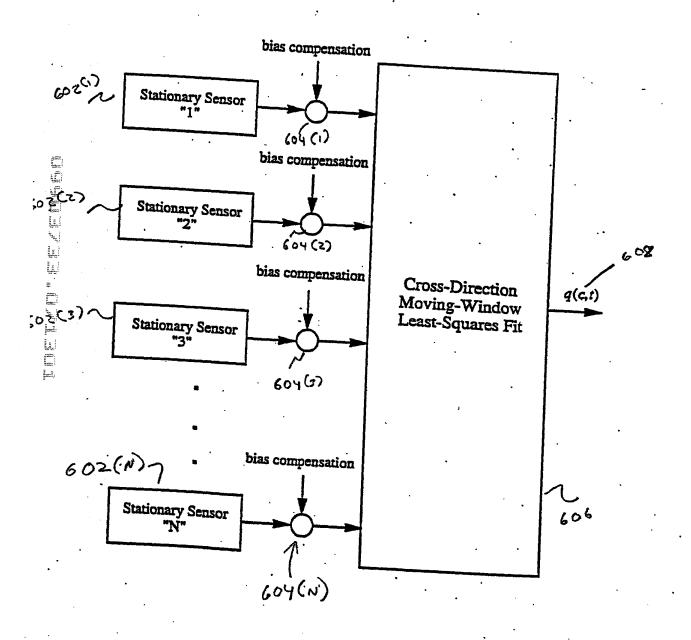


Figure 6: Moving-Window Least-Squares Processing to Derive Continuous CD
Paper Parameter Variation as a Function of Time